reference to any specimen, description or illustration as required by the Code'' (letter of 7th January 1963). Thus the ''type'' listed by Deignan has no such status, and the name *Pardaliparus albescens* McGregor continues to be available for a subspecies of *Parus elegans*, as used in the present paper.

An unfortunate error in my 1958 revision needs to be corrected. I wrote (Parkes, 1958: 96): ''The Elegant Titmouse is the only species of its family to have reached a tropical archipelago.'' This, of course, was an inexcusable *lapsus*; there is another species of titmouse in the Philippines (*Parus semilarvatus*), and two species (*Parus major* and *Melanochlora sultanea*) occur in Malaysia.

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Notes on *Ducula rosacea* (Temminck) living on the Karimundjawa and Kangean Archipelagos

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Received 16th July, 1962

Though there is some variation in the colour of nearly all parts of the plumage in birds from the same localities (even of birds with equally developed gonads) those differences are not very important in the specimens before me. Besides 19 birds from the Karimundjawa Archipelago among which are 16 freshly collected skins, we have five from the Kangean Islands, one from Bawean and seven old skins from more eastern localities, together with a bird from Billiton Island. We could not study any material from the Bay of Djakarta or the Thousand Islands (North of Djakarta), but the late Dr. G. C. A. Junge was so kind as to measure for me the six specimens from Djakarta Bay present in the Leyden Museum.

Besides the typical race known from many parts of Indonesia, the subspecies *zamydrus* (from Solombo and Arends Islands, eastern Java sea) and *whartoni* (Christmas Island) are known. This last race does not interest us here because of its much larger size, so that we may concentrate our attention on *zamydrus*. This subspecies was separated by Oberholser on account of its being ''decidedly darker above, with the metallic sheen on interscapular region and posterior parts more evident (less overlaid with gray)''.

After comparing three *Ducula rosacea* from Karimundjawa, Chasen[1] wrote: ''The characters relied upon for the separation of *zamydrus* are not of racial significance'' because those Karimundjawa birds were paler and had the metallic sheen less obvious than a bird from Romah Island (Southwestern Islands, east of the Smaller Sunda Islands). But two years later in his Handlist of Malaysian Birds (1935) he includes Karimundjawa

within the range of the typical race, though "they of course may belong to the subspecies *zamydrus*".

When considering our material from the Karimundjawa Archipelago we reach quite another conclusion because birds from this locality average decidedly darker than nearly all other skins studied by me, including the small series of freshly obtained birds from the Kangean Islands. These birds do not only average darker on the wings and the mantle, but also on the nuchal region and on the vinaceous area of neck and head; they also average darker on the lower parts, but do not differ in the colour of the under tail-coverts. Last but not least they have more metallic sheen on the wings and the mantle, in some individuals so strongly that they show some similarity to *aenea*. Owing to the dark nuchal area there is much less contrast with the darker mantle than is the case in freshly collected Kangean birds. When eleven birds are laid belly down and the five lightest skins are selected, they include all four Kangean birds and as we select from the same series the five darkest birds, showing most strikingly the metallic sheen, they all originate from the Karimundjawa Islands, so there seems some reason to accept Oberholser's *zamydrus*, though it is strange that the population living on the Kangean Islands does not show any resemblance to *zamydrus*. The only bird from Billiton Island we possess is one of the lightest specimens we could study, though the difference between one old Kangean skin and three old birds from Karimundjawa is less pronounced than is the case in fresh material.

The only bird we obtained from Bawean Island seems to be much closer to *zamydrus* so that we think it justified to include Bawean within the range of this subspecies.

When birds from Kangean may be seen as good representatives of the nominate race, it may be remarked that two old skins from Billiton and Tual (Kei Islands, East Indonesia) appear also to belong to this race. But six old skins from the Southwestern Islands (Moa, Wettar, Kissar and Rhoma) and two from Kaloa Tua (North of Flores) and Letti seem to resemble *zamydrus*, especially on the upper parts.

On the Kangean Archipelago and Bawean Island both *Ducula aenea* and *Ducula rosacea* do occur, but on Karimundjawa only the latter species and on the islands around the Sunda Strait we found only *Ducula aenea*, whereas on the small islands in the Bay of Djakarta, which I visited innumerable times, I found *D. rosacea* and never *D. aenea*.

From the measurements given below it is evident that there are no important size differences between the typical race and *zamydrus*. though the three males from Djakarta Bay (measured by Junge) seem to have a somewhat shorter tail than have Karimundjawa birds and those from the Smaller Sunda Islands and the Kei Islands. The average weight of Karimundjawa males is 413.62 gr. and that of Kangean birds 389.50 gr. which difference does not seem very important for such large birds. Females from the Karimundjawa Islands average in weight 360.5 gr.

Measurements:

♂♂ Wing; *rosacea* (Kangean Archipelago): 220, 227, 233, 235; *zamydrus* (Karimundjawa Archipelago): 218, 228, 230, 230, 230, 231, 232, 232, 234, 235, 236; *zamydrus* (Southwestern Islands and Kaloa Tua): 237, 246, 253; *whartoni* (Christmas Island, *ex. lit.*): 254, 260, 269, 270, 271, 271, 273 mm.

Tail; *rosacea* (Kangean Archipelago): 143, 148, 150, 155; *zamydrus* (Karimundjawa Archipelago): 143, 144, 147, 150, 150, 152, 155, 155, 161, 161; *zamydrus* (Southwestern Islands and Kaloa Tua): 155, 160, 161; *whartoni* (Christmas Island, *ex lit.*): 172, 180, 181, 183, 186, 186, 186, 189 mm.

Culmen; *rosacea* (Kangean Archipelago): 19, 19.5, 20, 21; *zamydrus* (Karimundjawa Archipelago): 18.1, 19.2, 19.5, 19.5, 19.8, 20, 20.5, 20.5, 20.7, 21, 21.5; *zamydrus* (Southwestern Islands and Kaloa Tua): 19.2, 20.9, 21; *whartoni* (Christmas Island, *ex lit.*): 18, 20, 20, 20, 20, 20, 21, 22 mm.

Max., min. and average measurements: (in mm.)

	rosacea (Djakarta Bay) (3♂, Junge)	*rosacea* (Kangean)	*zamydrus* (Karimundjawa)	*zamydrus* (SW. Islands)	*whartoni* (Christmas Island) 8♂
Wing:	219–235	220–235	218–236	237–253	254–273
	228	228·75	230·55	245·33	266·86
Tail:	130–143	143–155	143–161	155–161	172–189
	137	149	151·80	158·67	182·88
Culmen:	17–19	19–21	18·1–21·5	19·2–21	18–22
	18	19·88	20·03	20·37	20·13

♀♀ Wing; *zamydrus* (Karimundjawa Archipelago): 218, 218, 222, 222, 225, 226, 233, 237; *zamydrus* (Bawean Island): 234; *zamydrus* (Southwestern Islands and Kaloa Tua): 224, 231, 237, 238, 238; *whartoni* (Christmas Island *ex lit.*): 258, 267 mm.

Tail; *zamydrus* (Karimundjawa Archipelago): 140, 144, 145, 148, 150, 151, 160; *zamydrus* (Bawean Island): 156; *zamydrus* (Southwestern Islands and Kaloa Tua): 135, 145, 146, 148, 151; *whartoni* (Christmas Island, *ex. lit*): 172, 175, 187 mm.

Culmen; *zamydrus* (Karimundjawa Archipelago); 17.4, 18.1, 19.1, 19.5, 19.8, 20, 20.6; *zamydrus* (Bawean Island): 16.8; *zamydrus* (Southwestern Islands and Kaloa Tua): 18.9, 19.3, 21, 21, 22.5; *whartoni* (Christmas Island, *ex lit.*): 20, 20, 21 mm.

Max., min. and average measurements:

	rosacea (Djakarta Bay) (2♀, Junge)	*zamydrus* (Karimundjawa)	*zamydrus* (Bawean)	*zamydrus* (SW. Islands)	*whartoni* (Christmas Island (3♀)
Wing:	225, 231	218–237	234	224–238	258, 267
	228	225·13		233·60	262·50
Tail:	139–149	140–160	156	135–151	172–187
	142·33	148·29		145	178
Culmen:	16–19	17·4–20·6	16·80	18·9–22·5	20–21
	18	19·25		20·54	20·33

Reference:
[1] Chasen, F. N. A small collection of Birds from the Karimun Djawa Islands; *Treubia*, 14, 1933, p.166.